

From the INTERNATIONAL BUREAU

PCT

NOTIFICATION OF TRANSMITTAL
OF COPIES OF TRANSLATION
OF THE INTERNATIONAL PRELIMINARY REPORT
ON PATENTABILITY
(CHAPTER I OR CHAPTER II
OF THE PATENT COOPERATION TREATY)
(PCT Rule 72.2)

To:

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Date of mailing (day/month/year) 09 June 2005 (09.06.2005)	
Applicant's or agent's file reference 142118-993	IMPORTANT NOTIFICATION
International application No. PCT/JP2003/010705	International filing date (day/month/year) 25 August 2003 (25.08.2003)
Applicant TOKYO ELECTRON LIMITED et al	

1. Transmittal of the translation to the applicant.

The International Bureau transmits herewith a copy of the English translation made by the International Bureau of the international preliminary examination report established by the International Preliminary Examining Authority.

2. Transmittal of the copy of the translation to the elected Offices.

The International Bureau notifies the applicant that copies of that translation have been transmitted to the following elected Offices requiring such translation:

CN, EP, KR

The following elected Offices, having waived the requirement for such a transmittal at this time, will receive copies of that translation from the International Bureau only upon their request:

US

3. Reminder regarding translation into (one of) the official language(s) of the elected Office(s).

The applicant is reminded that, where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary examination report.

It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned (Rule 74.1). See Volume II of the PCT Applicant's Guide for further details.

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland	Authorized officer Yoshiko Kuwahara
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Translation

PATENT COOPERATION TREATY

PCT/JP2003/010705



PCT 10 Ass'd PCT/PTO 30 JAN 2006

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY
(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 142118-993	FOR FURTHER ACTION See Form PCT/IPEA/416	
International application No. PCT/JP2003/010705	International filing date (day/month/year) 25 August 2003 (25.08.2003)	Priority date (day/month/year) 23 August 2002 (23.08.2002)
International Patent Classification (IPC) or national classification and IPC H01L 21/31, C23C 16/448		
Applicant TOKYO ELECTRON LIMITED		

1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 6 sheets, including this cover sheet.

3. This report is also accompanied by ANNEXES, comprising:

a. ☐ (sent to the applicant and to the International Bureau) a total of _____ sheets, as follows:

☐ sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).

☐ sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.

b. ☐ (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) _____, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).

4. This report contains indications relating to the following items:

☒ Box No. I Basis of the report

☐ Box No. II Priority

☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

☒ Box No. IV Lack of unity of invention

☒ Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

☐ Box No. VI Certain documents cited

☐ Box No. VII Certain defects in the international application

☐ Box No. VIII Certain observations on the international application

Date of submission of the demand 30 January 2004 (30.01.2004)	Date of completion of this report 14 October 2004 (14.10.2004)
Name and mailing address of the IPEA/JP	Authorized officer
Facsimile No.	Telephone No.

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/JP2003/010705

Box No. I Basis of the report

1. With regard to the language, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ This report is based on translations from the original language into the following language _____, which is language of a translation furnished for the purpose of:

- ☐ international search (under Rules 12.3 and 23.1(b))
☐ publication of the international application (under Rule 12.4)
☐ international preliminary examination (under Rules 55.2 and/or 55.3)

2. With regard to the elements of the international application, this report is based on (*replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report*):

☒ The international application as originally filed/furnished

☐ the description:

pages _____, as originally filed/furnished

pages* _____ received by this Authority on _____

pages* _____ received by this Authority on _____

☐ the claims:

pages _____, as originally filed/furnished

pages* _____, as amended (together with any statement) under Article 19

pages* _____ received by this Authority on _____

pages* _____ received by this Authority on _____

☐ the drawings:

pages _____, as originally filed/furnished

pages* _____ received by this Authority on _____

pages* _____ received by this Authority on _____

☐ a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.

3. ☐ The amendments have resulted in the cancellation of:

☐ the description, pages _____

☐ the claims, Nos. _____

☐ the drawings, sheets/figs _____

☐ the sequence listing (*specify*): _____

☐ any table(s) related to sequence listing (*specify*): _____

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

☐ the description, pages _____

☐ the claims, Nos. _____

☐ the drawings, sheets/figs _____

☐ the sequence listing (*specify*): _____

☐ any table(s) related to sequence listing (*specify*): _____

* If item 4 applies, some or all of those sheets may be marked "superseded."

Box No. IV Lack of unity of invention

1. ☐ In response to the invitation to restrict or pay additional fees the applicant has:

- ☐ restricted the claims.
- ☐ paid additional fees.
- ☐ paid additional fees under protest.
- ☐ neither restricted nor paid additional fees.

2. ☒ This Authority found that the requirement of unity of invention is not complied with and chose, according to Rule 68.1, not to invite the applicant to restrict or pay additional fees.

3. This Authority considers that the requirement of unity of invention in accordance with Rules 13.1, 13.2 and 13.3 is

- ☐ complied with.
- ☒ not complied with for the following reasons:

The special technical feature of claims 1-7 is that a first carrier-gas feeding means "is composed of a gas dispersion chamber provided on the bottom of a material storage vessel and a gas jetting plate dividing the said gas dispersion chamber and having a large number of pores for gas jetting in it."

The special technical feature of claims 8-25 is that a processing system has "a opening/closing valve to open/close the gas passage."

The special technical feature of claims 26-44 is that a processing system has "a detection means to detect the state of the inside of a gas passage or a material storage vessel, and a control part to perform a control function in such a way that the values detected by the said detection means are kept at predetermined values."

4. Consequently, this report has been established in respect of the following parts of the international application:

- ☒ all parts.
- ☐ the parts relating to claims Nos. _____

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	2-3, 7-25, 29, 34-44	YES
	Claims	1, 4-6, 26-28, 30-33	NO
Inventive step (IS)	Claims	2-3, 8-25, 29, 34-35	YES
	Claims	1, 4-7, 26-28, 30-33, 36-44	NO
Industrial applicability (IA)	Claims	1-44	YES
	Claims		NO

2. Citations and explanations (Rule 70.7)

Document 1: JP, 2001-131754, A (Samsung Electronics Co., Ltd.), 15 May, 2001 (15.05.01), Figs. 5 and 9, paragraph [0071], & US, 6424800, B1, Figs. 5 and 9
 Document 2: JP, 6-196414, A (Kawasaki Steel Corp.), 15 July, 1994 (15.07.94), Figs. 1-3
 Document 3: JP, 2-256238, A (Nippon Telegraph and Telephone Corp.), 17 October, 1990 (17.10.90), Fig. 1, & US, 5019531, A, Fig. 1
 Document 4: JP, 2001-73145, A (Tokyo Electron Ltd.), 21 March, 2001 (21.03.01), Fig. 4
 Document 5: JP, 2001-68465, A (Tokyo Electron Ltd.), 16 March, 2001 (16.03.01), Figs. 1 and 5, & US, 6482266, B1
 Document 6: JP, 2000-122725, A (CKD K.K.), 28 April, 2000 (28.04.00), Fig. 1
 Document 7: JP, 4-99279, A (Seiko Epson Corp.), 31 March, 1992 (31.03.92), Figs. 1 and 2
 Document 8: JP, 7-18449, A (Hitachi, Ltd.), 20 January, 1995 (20.01.95), paragraphs [0028] and [0029], Fig. 3
 Document 9: WO, 94-06529, A1 (Mitsubishi Electric Corp.), 3 March, 1994 (03.03.94), Fig. 15, & US, 5520858, A

Claim 1

The subject matter of claim 1 does not appear to be novel in view of documents 1 and 2 cited in the ISR. "A gas dispersion chamber provided on the bottom of the said material storage vessel, and a gas jetting plate dividing the said gas dispersion chamber and having a large number of gas jetting pores in it," described in claim 1, are disclosed in document 1 (Fig. 5) and document 2 (Fig. 1) respectively.

Claims 4-6

The subject matters of claims 4-6 do not appear to be novel in view of document 1 cited in the ISR. A feature described in claim 6 wherein "the said means of heating a material is embedded in the said gas jetting plate" is disclosed in document 1 (Fig. 9).

Supplemental Box

In case the space in any of the preceding boxes is not sufficient.
Continuation of: V2

Claim 7

The subject matter of claim 7 does not appear to involve an inventive step in view of documents 1 and 2 cited in the ISR. Although neither of documents 1 and 2 describes that "the said shower part is made hollow with empty space inside and is supported on the bottom by a support member," a method of supporting the shower part is a matter that a person skilled in the art could have decided as required.

Claims 2, 3, 34 and 35

The subject matters of claims 2, 3, 34 and 35 appear to involve an inventive step over the documents cited in the ISR. Neither of documents 1 and 2 describes that "a porous fluoric resin layer is provided on the gas jetting face of the said gas jetting plate" or that "the said gas jetting plate is composed of a porous fluoric resin."

Claims 8-25

The subject matters of claims 8-25 appear to involve an inventive step over the documents cited in the ISR. Neither of documents 3 and 4 describes that (1) "a gas passage extended upward from the said shower head part," (2) "a material storage vessel installed on the top end of the said gas passage to contain the said metal compound material inside," and (3) "an opening/closing valve to open/close the said gas passage are provided."

Claims 26, 27 and 33

The subject matters of claims 26, 27 and 33 do not appear to be novel in view of document 1 cited in the ISR. "A temperature detection means" described in claim 27 is disclosed as "a thermal sensor 74" in document 1 (Fig. 5 and paragraph [0071]).

Claims 26, 28 and 30

The subject matters of claims 26, 28 and 30 do not appear to be novel in view of document 5 cited in the ISR. "A pressure detection means" described in claim 28 is disclosed in document 5 (Fig. 1). "A partial-pressure detection means" described in claim 30 is disclosed in document 5 (Fig. 5).

Claim 29

The subject matter of claim 29 appears to involve an inventive step over the documents cited in the ISR. Document 6 does not describe that the said material-heating means or the said first carrier-gas feeding means is controlled."

Claims 26 and 31

The subject matters of claims 26 and 31 do not appear to be novel in view of document 7 cited in the ISR. "A gas flow detection means" described in claim 31 is disclosed in document 7 (Fig. 1).

Supplemental Box

In case the space in any of the preceding boxes is not sufficient.
Continuation of: V.2

Claims 26 and 32

The subject matters of claims 26 and 32 do not appear to be novel in view of document 8 cited in the ISR.
(a) "A gas flow detection means" and (b) a feature wherein "the gas flow in each of the said first and second carrier-gas feeding means is controlled" described in claim 32 are disclosed in document 8 (Fig. 3 and paragraphs [0028] and [0029]).

Claim 36

The subject matter of claim 36 does not appear to involve an inventive step in view of documents 5, 7 and 8 cited in the ISR. Although none of documents 5, 7 and 8 describes that "material-heating means are provided in the bottom part, the side part and the ceiling part of this material storage vessel, and the said material-heating means can be individually controlled," using a plurality of heating means and constituting them so that they can be individually controlled is a well-known technology, and a person skilled in the art could have easily conceived of the idea of adopting them.

Claims 37-44

The subject matters of claims 37-44 do not appear to involve an inventive step in view of documents 1 and 9 cited in the ISR. Because documents 1 and 9 belong to respective technical fields that are closely related to each other, a person skilled in the art could have easily conceived of the idea of applying a "baffle plate member" described in document 9 (Fig. 15) to the invention described in document 1.